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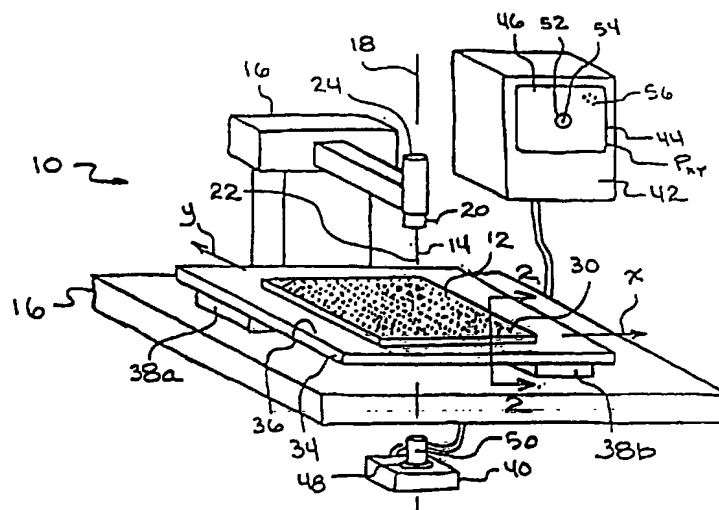
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(54) Title: POSITIONING SYSTEM FOR MOVING A SELECTED STATION OF A HOLDING PLATE TO A PREDETERMINED LOCATION FOR INTERACTION WITH A PROBE



(57) Abstract: A device for positioning the tip of an elongated probe (14) at a selected station of a holding plate (12) includes motors to move the holding plate and a supporting stage within a coordinate plane ( $m_{xy}$ ). The elongated probe is also movable along a linear probe axis that is orientated normal to the coordinate plane ( $m_{xy}$ ). A camera creates a pixel image of an optical marker placed on the stage. The image defines a coordinate plane ( $p_{xy}$ ). To relate the coordinate plane ( $p_{xy}$ ) to the coordinate plane ( $m_{xy}$ ), the optical marker is moved to successive locations in the  $m_{xy}$  plane and a pixel image is obtained at each location. Using the pixel images, a computer calculates the relationship between coordinate planes and uses the relationship to signal the motors to move the holding plate in the  $m_{xy}$  plane and position the selected station on the probe axis for interaction with the probe.



WO 03/079029 A1